

Attorney Docket No.: 0200109C2
Serial No.: 10/054,327

REMARKS

The present amendment is in response to the *Non-Final* Office Action, dated July 20, 2004, where the Examiner has rejected claims 17-21, 27, 30, 31, 66-69, 71-82, 94 and 95, has objected to claims 28, 37-41, 61-65 and 70, and has allowed claims 83-93. By the present amendment, claims 17, 27, 31, 37, 61, 64, 66, 67, 68, 81, 94 and 95 have been amended. After the present amendment, claims 17-21, 27-28, 30-31, 37-41 and 61-95 are pending in the application. Reconsideration and allowance of pending claims in view of the amendments and the following remarks are respectfully requested.

A. Objection to the Claims

The Examiner has objected to claims 17-21, 37-41 and 61-70. By the present amendment, applicants have amended claims 17, 37, 61, 67 and 68, as suggested by the Examiner, except that the word "said" was not changed to "the" in claim 37, because applicants fail to recognize the Examiner's reason for such suggestion. Applicants respectfully submit that the Examiner's objection to claims 17-21, 37-41 and 61-70 has been overcome, and claims 37-41 and 61-65 are now in condition for allowance.

B. Rejection of Claims 66, 81, 94 and 95 under 35 U.S.C. § 112, ¶ 2

The Examiner has rejected claims 66, 81, 94 and 95 under 35 U.S.C. § 112, ¶ 2. Applicants respectfully submit that by the present amendment, claims 66, 81, 94 and 95 have been amended to overcome the Examiner's rejection under 35 U.S.C. § 112, ¶ 2, as shown above. Accordingly, claims 66, 94 and 95 are now in condition for allowance.

C. Rejection of Claims 17, 67, 69, 71-73, 78 and 82 under 35 U.S.C. § 102(e)

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The Examiner has rejected claims 17, 67, 69, 71-73, 78 and 82 under 35 U.S.C. § 102(e) as being anticipated by Timm, et al. (USPN 6,055,268) (hereinafter "Timm"). Applicants respectfully disagree.

Claim 17 in part recites: "wherein each of the plurality of words includes a portion of the data and a portion of the operational and/or control information." Turning to Fig. 3B of the present application and its related written description, the present application discloses that "at least one operational control bit (D15) is reserved or allocated for an embedded operation channel (EOC)." (Page 15, lines 5-7.) The present application further explains that:

It can be observed from FIG. 3B that EOC has an effective bit rate equal to the word clock. The present invention, therefore, provides a method for providing control signaling information that does not require a separate time division multiplexed control word sent over the link as is done in the aforementioned AC97 prior art data link. This operational information is encoded by DSL-D Interface 233 into the data stream using any suitable logic, and is then decoded and acted upon by corresponding logic in DSL-A Interface 216" (Page 15, lines 20-26.)

Therefore, the limitation "wherein each of the plurality of words includes a portion of the data and a portion of the operational and/or control information" is quite significant, because, for example, as shown in FIG. 3B, D15 of each word is a control bit. This is in sharp contrast to the prior art approach, where the operational and/or control information is transmitted over the link as "separate time division multiplexed control word." It is respectfully submitted that Timm merely discloses the prior art approach. In other words, as shown in FIG. 1d of Timm, Framer 196 and EOC 198 are two different blocks that feed Channel Multiplexer 199 and, thus, it is not shown, described or remotely suggested by Timm that the operational and/or control information is sent to the Framer 196 by EOC for embedding the operational and/or control information in each data word. Further, because Channel Multiplexer 199 appears after Framer 196, it is not

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possible for Channel Multiplexer 199 to insert the operational and/or control information into each data word after being processed by Framer 196. Thus, Timm does not disclose, teach or suggest that "each of the plurality of words includes a portion of the data and a portion of the operational and/or control information", but in fact teaches the prior art approach, which is to transmit a separate time division multiplexed control word over the link.

Accordingly, applicants respectfully submit that claim 17 and its dependent claims 18-21 and 67-70 should be allowed.

Further, applicants have amended claim 71 to recite: "wherein said data line is time division multiplexed such that one or more bits of said DSL operational and/or control information are embedded within each word of said DSL data transferred between the DSL digital circuit section and the DSL analog circuit section over said data line." As stated above, Timm merely discloses that the operational and/or control information is transmitted over the link as "separate time division multiplexed control word", and fails to disclose, teach or suggest that the operational and/or control information is embedded within each of the data words.

Accordingly, for the same reasons stated above in conjunction with patentability of claim 17, applicants respectfully submit that claim 71 and its dependent claims 72-82 should be allowed.

D. Rejection of Claim 68 under 35 U.S.C. § 103(a)

The Examiner has rejected claim 68 under 35 U.S.C. § 103(a) as being unpatentable over Timm. Applicants respectfully disagree.

Claim 68 depends from claim 17, and should be allowed at least for the same reasons stated in conjunction with patentability of claim 17.

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E. Rejection of Claims 18-21, 74-77 and 79 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 18-21, 74-77 and 79 under 35 U.S.C. § 103(a) as being unpatentable over Timm in view of Bae, et al. (USPN 5,832,387) ("Bae"). Applicants respectfully disagree.

Claims 18-21 depend from claim 17, and should be allowed at least for the same reasons stated in conjunction with patentability of claim 17. Further, claims 74-77 and 79 depend from claim 71, and should be allowed at least for the same reasons stated in conjunction with patentability of claim 71.

F. Rejection of Claim 27 under 35 U.S.C. § 103(a)

The Examiner has rejected claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Bingham, et al. (USPN 5,680,394) ("Bingham"). Applicants respectfully disagree.

Further, applicants have amended claim 27 to recite: "wherein operational and/or control information for each of said plurality of separate communications circuits is embedded within each of the data words communicated through each of their respective communications channels." Applicants respectfully submit that for the reasons stated above in conjunction with patentability of claim 17, Bingham fails to disclose, teach or suggest that "operational and/or control information for each of said plurality of separate communications circuits is embedded within each of the data words."

Accordingly, applicants respectfully submit that claim 27 and its dependent claims 28 and 30-31 should be allowed.

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G. Rejection of Claim 30 under 35 U.S.C. § 103(a)

The Examiner has rejected claim 30 under 35 U.S.C. § 103(a) as being unpatentable over Bingham in view of Leo, et al. (USPN 4,999,834) ("Leo"). Applicants respectfully disagree.

Claim 30 depends from claim 27, and should be allowed at least for the same reasons stated in conjunction with patentability of claim 27.

H. Rejection of Claim 31 under 35 U.S.C. § 103(a)

The Examiner has rejected claim 31 under 35 U.S.C. § 103(a) as being unpatentable over Bingham in view of the admitted prior art. Applicants respectfully disagree.

Claim 31 depends from claim 27, and should be allowed at least for the same reasons stated in conjunction with patentability of claim 27.

I. Rejection of Claim 80 under 35 U.S.C. § 103(a)

The Examiner has rejected claim 80 under 35 U.S.C. § 103(a) as being unpatentable over Timm in view of the admitted prior art. Applicants respectfully disagree.

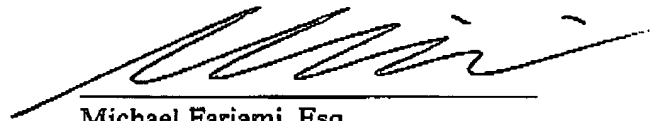
Claim 80 depends from claim 71, and should be allowed at least for the same reasons stated in conjunction with patentability of claim 71.

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J. Conclusion

For all the foregoing reasons, an early allowance of claims 17-21, 27-28, 30-31, 37-41 and 61-95 pending in the present application is respectfully requested. The Examiner is invited to contact the undersigned for any questions.

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